



CLAIMS AS ALLOWED

Claims 1-28

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Title: METHOD AND SYSTEM FOR INTEGRATING ENCRYPTION FUNCTIONALITY INTO A
DATABASE SYSTEM
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1. A method for integrating encryption functionality into a database system, the method comprising:
 - (a) providing at least two functions to support data encryption in a database system; and
 - (b) invoking the at least two functions within structured query language statements.
2. The method of claim 1, wherein step (a) further comprises (a1) adding the at least two functions as user-defined functions in the database system.
3. The method of claim 2, wherein the user-defined functions further comprise a first function to encrypt user-specified data when inserted or updated in the database system.
4. The method of claim 3, wherein the user-defined functions further comprise a second function to decrypt the user-specified data when selected from the database system.
5. The method of claim 3, wherein the first function further encrypts the user-specified data with a user-specified password.

6. The method of claim 5, wherein the first function further encrypts with a password hint.
7. The method of claim 6, wherein the user-defined functions further comprise a third function to get the password hint.
8. A system for integrating encryption functionality into a database system, the system comprising:
 - at least one computer processing device; and
 - a database management system installed on the at least one computer processing device, the database management system supporting utilization of at least two functions for data encryption,
 - wherein the at least two functions for data encryption are invoked within structured query language statements.
9. The system of claim 8, wherein the at least two functions further comprise user-defined functions in the database management system.
10. The system of claim 9, wherein the user-defined functions further comprise a first function to encrypt user-specified data when inserted or updated in the database management system.
11. The method of claim 10, wherein the user-defined functions further comprise a second function to decrypt the user-specified data when selected from the database management system.

12. The system of claim 10, wherein the first function further encrypts the user-specified data with a user-specified password.

13. The system of claim 12, wherein the first function further encrypts with a password hint.

14. The system of claim 13, wherein the user-defined functions further comprise a third function to get the password hint.

15. A computer readable medium containing program instructions for integrating encryption functionality into a database system, the program instructions comprising:

- (a) providing at least two functions to support data encryption in a database system; and
- (b) invoking the at least two functions within structured query language statements.

16. The computer readable medium of claim 15, wherein step (a) further comprises (a1) adding the at least two functions as user-defined functions in the database system.

17. The computer readable medium of claim 16, wherein the user-defined functions further comprise a first function to encrypt the user-specified data when inserted or updated in the database system, and a second function to decrypt the user-specified data when selected from the database system.

18. The computer readable medium of claim 17, wherein the first function further encrypts the user-specified data with a user-specified password.

19. The computer readable medium of claim 18, wherein the first function further encrypts with a password hint.

20. The computer readable medium of claim 19, wherein the user-defined functions further comprise a third function to get the password hint.

21. A method for integrating encryption functionality into a database system, the method comprising:

defining a function to support encryption of data in a database system, the encryption of data being based on a user-specified password, the function having a function name; and

invoking the function within a structured query language statement to control access to the data in the database system including encrypting the data within the database system with the user-specified password,

wherein the structured query language statement includes the function name and the user-specified password.

22. The method of claim 21, wherein the function is a user-defined function or a built-in function within the database system.

23. The method of claim 21, wherein defining a function to support encryption comprises:

defining an encrypt function to encrypt data when inserted or updated in the database system; and

defining a decrypt function to decrypt data when selected from the database system.

24. The method of claim 23, wherein:

the encrypt function further encrypts a password hint that assists a user in remembering the user-specified password; and

the method further includes defining a third function to get the password hint.

25. A computer readable medium containing program instructions for integrating encryption functionality into a database system, the program instructions comprising:

defining a function to support encryption of data in a database system, the encryption of data being based on a user-specified password, the function having a function name; and

invoking the function within a structured query language statement to control access to the data in the database system including encrypting the data within the database system with the user-specified password,

wherein the structured query language statement includes the function name and the user-specified password.

26. The computer readable medium of claim 25, wherein the function is a user-defined function or a built-in function within the database system.

27. The computer readable medium of claim 25, wherein defining a function to support encryption comprises:

defining an encrypt function to encrypt data when inserted or updated in the database system; and

defining a decrypt function to decrypt data when selected from the database system.

28. The computer readable medium of claim 27, wherein:

the encrypt function further encrypts a password hint that assists a user in remembering the user-specified password; and

the method further includes defining a third function to get the password hint.